Smelter and Refiner List

This list contains the smelters and refiners identified in Apple's supply chain as of December 31, 2024 for certain minerals.

As we work to protect the planet and uphold the human rights of people throughout our supply chain, Apple is committed to setting the highest standards when it comes to responsibly sourcing the materials used in our products.

Smelter and Refiner List

Our Responsible Materials Sourcing program sets supplier standards for the sourcing of the many materials found in Apple products, ranging from advanced bio-materials to minerals sourced from the earth and recycled content.

Our goal is to one day use only recycled and renewable materials in our products and packaging. As we make progress towards this goal, we continue our work to responsibly source minerals by conducting environmental and human rights due diligence in our supply chain, considering human rights impact on surrounding communities, and fostering opportunities for industry wide progress on responsible minerals sourcing. We utilize a comprehensive set of tools to drive progress in pursuit of these goals.

100% of identified tin, tantalum, tungsten, gold (3TG), cobalt, and lithium smelters and refiners have participated in a third-party audit.[1]

More information on our Responsible Materials Sourcing program is available in Apple's annual **People and Environment in Our Supply Chain Progress Report** as well as our **Conflict Minerals Report**.

For more details, as well as the most current status of each 3TG and cobalt smelter or refiner, please refer to the information provided by the **Responsible Minerals Initiative's Responsible Minerals Assurance Process** and the **London Buillion Market Association's Good Delivery List.**

Apple Responsible Sourcing Toolbox

- Innovate in materials sourcing
- Map the supply chain and establish strict requirements
- Understand risks by using supply chain tools such as the Risk Readiness Assessment
- Conduct independent, third-party audits of primary and recycled materials
- Address risks that are found
- Publish smelter and refiner list annually
- Increase recycled or renewable content
- Support local communities
- Engage with civil society and support local human rights and environmental defenders
- Strengthen industry traceability systems to increase transparency
- Develop and drive common industry standards
- Provide training to supply chain actors to strengthen due diligence

[1] As of June 2024, Apple issued a notification to its suppliers to cease the sourcing, directly or indirectly, of 3TG for Apple parts and products from the DRC and Rwanda.

Cobalt

Smelter or refiner name	Country or region
Fujian Evergreen New Energy Technology Co.	China mainland
Gangzhou Yi Hao Umicore Industry Co.	China mainland
Ganzhou Tengyuan Cobalt New Material Co., Ltd.	China mainland
Gem (Jiangsu) Cobalt Industry Co., Ltd.	China mainland
Guangdong Jiana Energy Technology Co., Ltd.	China mainland
Hunan CNGR New Energy Science & Technology Co., Ltd.	China mainland
Jingmen GEM Co., Ltd.	China mainland
Lanzhou Jinchuan Advanced Materials Technology Co., Ltd.	China mainland
Quzhou Huayou Cobalt New Material Co., Ltd.	China mainland
Umicore Finland Oy	Finland
Umicore Olen	Belgium
XTC New Energy Materials (Xiamen) LTD.	China mainland
Zhejiang Huayou Cobalt Company Limited	China mainland
Zhejiang New Era Zhongneng Technology Co., Ltd.	China mainland
Zhuhai Kelixin Metal Materials Co., Ltd.	China mainland

Lithium

Smelter or refiner name	Country or region
General Lithium Corporation	China mainland
Guangdong Guanghua Science & Technology Co., Ltd.	China mainland
Hunan Yongshan Lithium Co., Ltd.	China mainland
Jiangxi Dongpeng New Materials Co., Ltd.	China mainland
Jiangxi Ganfeng Lithium Co., Ltd.	China mainland
Ningdu Ganfeng Lithium Co., Ltd.	China mainland
Qinghai Dongtai Jinear Lithium Resources Co., Ltd.	China mainland
Qinhai CITIC Guoan Lithium Industry Development Co., Ltd.	China mainland
Sichuan CATH Co., Ltd	China mainland
Sichuan Zhiyuan Lithium Industries Co., Ltd	China mainland
SQM Salar S.A. (Del Carmen Plant)	Chile
Tianqi Lithium (Jiangsu) Co., Ltd.	China mainland
Tianqi Lithium Industry (Shehong) Co., Ltd.	China mainland

Gold

Smelter or refiner name	Country or region
Abington Reldan Metals, LLC	United States
Advanced Chemical Company	United States
Agosi AG	Germany
Aida Chemical Industries Co., Ltd.	Japan
Almalyk Mining and Metallurgical Complex (AMMC)	Uzbekistan
AngloGold Ashanti Corrego do Sitio Mineracao	Brazil
Argor-Heraeus S.A.	Switzerland
Asahi Pretec Corp.	Japan
Asahi Refining Canada Ltd.	Canada
Asahi Refining USA Inc.	United States
Asaka Riken Co., Ltd.	Japan
Aurubis AG	Germany
Bangalore Refinery	India
Bangko Sentral ng Pilipinas (Central Bank of the Philippines)	Philippines
Boliden Ronnskar	Sweden
C. Hafner GmbH + Co. KG	Germany
CCR Refinery - Glencore Canada Corporation	Canada
Chimet S.p.A.	Italy
Chugai Mining	Japan
Coimpa Industrial LTDA	Brazil
Dowa	Japan
DSC (Do Sung Corporation)	South Korea
Eco-System Recycling Co., Ltd. East Plant	Japan
Eco-System Recycling Co., Ltd. North Plant	Japan
Eco-System Recycling Co., Ltd. West Plant	Japan
GG Refinery Ltd.	Tanzania
Gold by Gold Colombia	Colombia
Gold Refinery of Zijin Mining Group Co., Ltd.	China mainland
Heimerle + Meule GmbH	Germany
Heraeus Germany GmbH Co. KG	Germany
Heraeus Metals Hong Kong Ltd.	China mainland
Inner Mongolia Qiankun Gold and Silver Refinery Share Co., Ltd.	China mainland
Ishifuku Metal Industry Co., Ltd.	Japan
Istanbul Gold Refinery	Turkey
Italpreziosi	Italy
Japan Mint	Japan
Jiangxi Copper Co., Ltd.	China mainland
JX Nippon Mining & Metals Co., Ltd.	Japan
Kazzinc	Kazakhstan
Kennecott Utah Copper LLC	United States
KGHM Polska Miedz Spolka Akcyjna	Poland
Kojima Chemicals Co., Ltd.	Japan
Korea Zinc Co., Ltd.	South Korea
L'Orfebre S.A.	Andorra
LS MnM Inc.	South Korea
LT Metal Ltd.	South Korea
Materion	United States
Matsuda Sangyo Co., Ltd.	Japan
Metal Concentrators SA (Pty) Ltd.	South Africa
Metalor Technologies (Hong Kong) Ltd.	China mainland
Metalor Technologies (Singapore) Pte., Ltd.	Singapore
Metalor Technologies (Suzhou) Ltd.	China mainland

Gold (cont.)

Smelter or refiner name	Country or region
Metalor Technologies S.A.	Switzerland
Metalor USA Refining Corporation	United States
Metalurgica Met-Mex Penoles S.A. De C.V.	Mexico
Mitsubishi Materials Corporation	Japan
Mitsui Mining and Smelting Co., Ltd.	Japan
MKS PAMP SA	Switzerland
MMTC-PAMP India Pvt., Ltd.	India
Nadir Metal Rafineri San. Ve Tic. A.S.	Turkey
Navoi Mining and Metallurgical Combinat	Uzbekistan
NH Recytech Company	South Korea
Nihon Material Co., Ltd.	Japan
Ogussa Osterreichische Gold- und Silber-Scheideanstalt GmbH	Austria
Ohura Precious Metal Industry Co., Ltd.	Japan
Planta Recuperadora de Metales SpA	Chile
PT Aneka Tambang (Persero) Tbk	Indonesia
PX Precinox S.A.	Switzerland
Rand Refinery (Pty) Ltd.	South Africa
REMONDIS PMR B.V.	Netherlands
Royal Canadian Mint	Canada
SAFINA A.S.	Czechia
SEMPSA Joyeria Plateria S.A.	Spain
Shandong Gold Smelting Co., Ltd.	China mainland
Shandong Zhaojin Gold & Silver Refinery Co., Ltd.	China mainland
Sichuan Tianze Precious Metals Co., Ltd.	China mainland
Solar Applied Materials Technology Corp.	Taiwan
Sumitomo Metal Mining Co., Ltd.	Japan
SungEel HiMetal Co., Ltd.	South Korea
T.C.A S.p.A	Italy
Tanaka Kikinzoku Kogyo K.K.	Japan
Tokuriki Honten Co., Ltd.	Japan
TOO Tau-Ken-Altyn	Kazakhstan
Torecom	South Korea
Umicore S.A. Business Unit Precious Metals Refining	Belgium
United Precious Metal Refining, Inc.	United States
Valcambi S.A.	Switzerland
WEEEREFINING	France
Western Australian Mint (T/a The Perth Mint)	Australia
WIELAND Edelmetalle GmbH	Germany
Yamakin Co., Ltd.	Japan
Yokohama Metal Co., Ltd.	Japan
Zhongyuan Gold Smelter of Zhongjin Gold Corporation	China mainland

Tantalum

Smelter or refiner name	Country or region
AMG Brasil	Brazil
D Block Metals, LLC	United States
F&X Electro-Materials Ltd.	China mainland
FIR Metals & Resource Ltd.	China mainland
Global Advanced Metals Aizu	Japan
Global Advanced Metals Boyertown	United States
Guangdong Rising Rare Metals-EO Materials Ltd.	China mainland
Hengyang King Xing Lifeng New Materials Co., Ltd.	China mainland
Jiangxi Dinghai Tantalum & Niobium Co., Ltd.	China mainland
Jiangxi Tuohong New Raw Material	China mainland
JiuJiang JinXin Nonferrous Metals Co., Ltd.	China mainland
Jiujiang Tanbre Co., Ltd.	China mainland
Jiujiang Zhongao Tantalum & Niobium Co., Ltd.	China mainland
KEMET de Mexico	Mexico
Materion Newton Inc.	United States
Metallurgical Products India Pvt., Ltd.	India
Mineracao Taboca S.A.	Brazil
Mitsui Mining and Smelting Co., Ltd.	Japan
Ningxia Orient Tantalum Industry Co., Ltd.	China mainland
NPM Silmet AS	Estonia
PowerX Ltd.	Rwanda
QuantumClean	United States
Resind Industria e Comercio Ltda.	Brazil
RFH Yancheng Jinye New Material Technology Co., Ltd.	China mainland
Taki Chemical Co., Ltd.	Japan
TANIOBIS Co., Ltd.	Thailand
TANIOBIS GmbH	Germany
TANIOBIS Japan Co., Ltd.	Japan
TANIOBIS Smelting GmbH & Co. KG	Germany
Telex Metals	United States
Ulba Metallurgical Plant JSC	Kazakhstan
XIMEI RESOURCES (GUANGDONG) LIMITED	China mainland
XinXing HaoRong Electronic Material Co., Ltd.	China mainland
Yanling Jincheng Tantalum & Niobium Co., Ltd.	China mainland

Tin

Smelter or refiner name	Country or region
Alpha Assembly Solutions Inc	United States
Aurubis Beerse	Belgium
Aurubis Berango	Spain
Chenzhou Yunxiang Mining and Metallurgy Co., Ltd.	China mainland
Chifeng Dajingzi Tin Industry Co., Ltd.	China mainland
China Tin Group Co., Ltd.	China mainland
CRM Fundicao De Metais E Comercio De Equipamentos Eletronicos Do Brasil Ltda	Brazil
CRM Synergies	Spain
CV Ayi Jaya	Indonesia
CV Venus Inti Perkasa	Indonesia
Dowa	Japan
DS Myanmar	Myanmar
EM Vinto	Bolivia
Estanho de Rondonia S.A.	Brazil
Fabrica Auricchio Industria e Comercio Ltda.	Brazil
Fenix Metals	Poland
Gejiu Non-Ferrous Metal Processing Co., Ltd.	China mainland
Guangdong Hanhe Non-Ferrous Metal Co., Ltd.	China mainland
HuiChang Hill Tin Industry Co., Ltd.	China mainland
Jiangxi New Nanshan Technology Ltd.	China mainland
Luna Smelter, Ltd.	Rwanda
Magnu's Minerais Metais e Ligas Ltda.	Brazil
Malaysia Smelting Corporation (MSC)	Malaysia
Malaysia Smelting Corporation Berhad (Port Klang)	Malaysia
Metallic Resources, Inc.	United States
Mineracao Taboca S.A.	Brazil
Mining Minerals Resources SARL	Democratic Republic of the Congo
Minsur	Peru
Mitsubishi Materials Corporation	Japan
O.M. Manufacturing (Thailand) Co., Ltd.	Thailand
O.M. Manufacturing Philippines, Inc.	Philippines
Operaciones Metalurgicas S.A.	Bolivia
Precious Minerals and Smelting Limited	India
PT Aries Kencana Sejahtera	Indonesia
PT Artha Cipta Langgeng	Indonesia
PT ATD Makmur Mandiri Jaya	Indonesia
PT Babel Inti Perkasa	Indonesia
PT Babel Surya Alam Lestari	Indonesia
PT Bangka Prima Tin	Indonesia
PT Bangka Serumpun	Indonesia
PT Bangka Tin Industry	Indonesia
PT Belitung Industri Sejahtera	Indonesia
PT Bukit Timah	Indonesia
PT Cipta Persada Mulia	Indonesia
PT Menara Cipta Mulia	Indonesia
PT Mitra Stania Prima	Indonesia
PT Mitra Sukses Globalindo	Indonesia
PT Premium Tin Indonesia	Indonesia
PT Prima Timah Utama	Indonesia
PT Putera Sarana Shakti (PT PSS)	Indonesia
PT Rajawali Rimba Perkasa	Indonesia

Tin (cont.)

Smelter or refiner name	Country or region
PT Rajehan Ariq	Indonesia
PT Refined Bangka Tin	Indonesia
PT Sariwiguna Binasentosa	Indonesia
PT Stanindo Inti Perkasa	Indonesia
PT Sukses Inti Makmur (SIM)	Indonesia
PT Timah Nusantara	Indonesia
PT Timah Tbk Kundur	Indonesia
PT Timah Tbk Mentok	Indonesia
PT Tinindo Inter Nusa	Indonesia
PT Tommy Utama	Indonesia
Resind Industria e Comercio Ltda.	Brazil
Rui Da Hung	Taiwan
Super Ligas	Brazil
Takehara PVD Materials Plant / PVD Materials Division of MITSUI MINING & SMELTING CO., LTD.	Japan
Thaisarco	Thailand
Tin Smelting Branch of Yunnan Tin Co., Ltd.	China mainland
Tin Technology & Refining	United States
White Solder Metalurgia e Mineracao Ltda.	Brazil
Woodcross Smelting Company Limited	Uganda
Yunnan Chengfeng Non-ferrous Metals Co., Ltd.	China mainland
Yunnan Yunfan Non-ferrous Metals Co., Ltd.	China mainland

Tungsten

Smelter or refiner name	Country or region
A.L.M.T. Corp.	Japan
Asia Tungsten Products Vietnam Ltd.	Vietnam
China Molybdenum Tungsten Co., Ltd.	China mainland
Chongyi Zhangyuan Tungsten Co., Ltd.	China mainland
Cronimet Brasil Ltda	Brazil
Fujian Xinlu Tungsten Co., Ltd.	China mainland
Ganzhou Jiangwu Ferrotungsten Co., Ltd.	China mainland
Ganzhou Seadragon W & Mo Co., Ltd.	China mainland
Global Tungsten & Powders LLC	United States
Guangdong Xianglu Tungsten Co., Ltd.	China mainland
H.C. Starck Tungsten GmbH	Germany
Hubei Green Tungsten Co., Ltd.	China mainland
Hunan Chenzhou Mining Co., Ltd.	China mainland
Hunan Shizhuyuan Nonferrous Metals Co., Ltd. Chenzhou Tungsten Products Branch	China mainland
Japan New Metals Co., Ltd.	Japan
Jiangwu H.C. Starck Tungsten Products Co., Ltd.	China mainland
Jiangxi Gan Bei Tungsten Co., Ltd.	China mainland
Jiangxi Tonggu Non-ferrous Metallurgical & Chemical Co., Ltd.	China mainland
Jiangxi Xinsheng Tungsten Industry Co., Ltd.	China mainland
Jiangxi Yaosheng Tungsten Co., Ltd.	China mainland
Kennametal Fallon	United States
Kennametal Huntsville	United States
Lianyou Metals Co., Ltd.	Taiwan
Lianyou Resources Co., Ltd.	Taiwan
Malipo Haiyu Tungsten Co., Ltd.	China mainland

Tungsten (cont.)

Smelter or refiner name	Country or region
Masan High-Tech Materials	Vietnam
Niagara Refining LLC	United States
Philippine Bonway Manufacturing Industrial Corporation	Philippines
Philippine Chuangxin Industrial Co., Inc.	Philippines
Shinwon Tungsten (Fujian Shanghang) Co., Ltd.	China mainland
TANIOBIS Smelting GmbH & Co. KG	Germany
Tungsten Vietnam Joint Stock Company	Vietnam
Wolfram Bergbau und Hutten AG	Austria
Xiamen Tungsten (H.C.) Co., Ltd.	China mainland
Xiamen Tungsten Co., Ltd.	China mainland

© 2025 Apple Inc. All rights reserved. Apple and the Apple logo are trademarks of Apple Inc., registered in the U.S. and other countries.
Other product and company names mentioned herein may be trademarks of their respective companies.